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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,369	12/19/2001	Hideaki Ito	740819-715	4540

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/018,369	Applicant(s) ITO ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/12/2002</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is confusing antecedent basis for the elongation limitations. For example, claim 1, line 10 refers to two different elongations. It is unclear which (if any) is the elongation of line 6. The problem is further exacerbated in claim 2 where it is impossible to determine which elongation is referred to by lines 4, 13 and 9. This makes it impossible to tell what the claims require.

Claim 3: lines 9-10 refer to making a single unit and elongating. This is not understood because they are already joined.

Claim 5: there is no antecedent basis for "the elongated glass rod that is used". There is no requirement that rod is elongated. Although claim 4 requires the elongating of the rod, there is no requirement that such be done at a time where there is "the gap" (claim 5, line 5). Since there is no requirement for the elongated rod, it is unclear if the present language of claim 5 implies that claim 4 actually requires the use of an elongated rod.

Claim 4: there is no antecedent basis for "the feed rate" (line 9). There is no requirement that there is any feeding. The same holds for the feed rates of lines 10-11.

Also in claim 5: it is unclear whether the adjusting of line 7 is in addition to the adjusting of claim 4, or if it simply further defines the adjusting of claim 4. Claim 6 is indefinite for the same reason.

Claim 6: Examiner does not understand what is meant by the ratio being in a direction. Along a longitudinal direction, there is only a length and no diameter, thus how could there be a ratio of diameters?

Claim 7 it is unclear if the forming of claim 7 is in addition to the forming of claim 4, or if it further limits it.

There is no antecedent basis for the various "the position"'s. Most importantly, Applicant's invention has the pipe and the rod becoming a single unit at all locations of the tube. Likewise all positions become elongated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipate by Berkey 5917109.

Looking to col. 5, lines 29-44 of Berkey, tube 27 is made by a method which includes elongating the tube. After it is made, a rod is inserted into the tube, and both are formed into a single unit (col. 6, lines 10-12) which is made into a fused assembly 38 (col. 7, lines 16-19). The assembly is then elongated: Col. 9, lines 46-49. The pressure reduction is disclosed at col. 7, lines 57.

Claim 3 does not limit where D_0 and d_0 are measured. They can be as shown in applicant's figure 2, or at any other location. In the Berkey invention it is deemed that the final product has all of the diameters being constant throughout the length of the product (accept the ends). It would be easily to show innumerable locations where $D_0 = D_1$ and $d_0 = d_1$. When those values are equal then $(d_0/D_0)/(d_1/D_1) = 1$ which is less than 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berkey 5917109.

Berkey doesn't indicate where each of the steps are located. It would have been obvious to have the Berkey steps performed in closely spaced machines. For example maybe have a distance between the first elongation and the collapsor being 2 meters and the distance between the collapsor and the second elongation also being 2 meters. With that, the positions would be 2 meters from each other so that L1 and L2 would each be 2 meters. And thus $L1/(L1+L2)$ would be 0.5. It would have been an obvious matter of routine assembly-line design to determine what particular positions the artisan determines to be optimal or desired.

Claims 4- 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobbins 6301934 or Siegmund 4578096 in view of Baumgart 4820320.

Dobbins and Siegmund both show adjusting the feed rate, but neither teaches using a reduced pressure or the rate not being more than twice the feed rate. Baumgart discloses that one can use a vacuum to assist the collapse: col. 6, lines 6-35. It would have been obvious to alter the Dobbins and/or Siegmund method by adding a vacuum assist, so that the preform collapses at a faster rate.

As to the feed rate limitations: See Siegmund col. 2: lines 55-62. A is the rate of rod, and B is the rate of the pipe. B/A starts out substantially equal to 0 (because B is initially about 0) and then progresses towards infinity as A goes to 0. Since Siegmund teaches that the ratio changes progressively, it would have been obvious that for at

least some times B/A is between 0.5 and 1.0. When the $B/A = 0.5$, then the feed rate of the rod is twice that of the pipe. When $B/A = 1$, the two rates are equal. And thus when B/A is between 0.5 and 1.0, then the conditions are met.

Dobbins figure 1 shows the adjustment of both feed rates (see also col. 2, line 60). Col. 5, lines 20-35 show that the velocities depend upon the cross sectional areas (A) of the components that are used. It would have been obvious to use speeds that meet the claimed criteria for at least a portion of the Dobbins process. It would depend upon the cross sectional areas of the tube and the rod. Clearly, if one was to use a rod that has twice the area of another rod, one would have to use half the speed to make the identical preform. It is simply a matter of design choice, and what tubes one has available and/or what size one can make.

Claim 5 compares the diameter to area. Such have unequal units. For example a 1 square meter = 1 meter. But convert it to millimeters. A square meter = 1,000,000 square mm, but a meter diameter is a mere 1000 mm. One could choose the measurement unit to get the inequality one desires by choosing the units to be meters, millimeters, angstrom, light-years or some other unit. AS to the set ratio: it would have been obvious to run the method so that one gets exactly what one desires - including the claimed ratio. The claim does not specify what sort of ratio: diameter, refractive index, density, etc. One would want the glasses to have the same refractive index ratio that one started out with.

Claim 6: Again, it would have been obvious to get a particular ratio, because one would want to produce what one wants to produce. Alternatively, it would have been

obvious to repeat the process numerous times so as to make identical product - the ratio would be set by the first run.

Claim 7: neither primary reference teaches the rotation. Col. 6 lines 7-18 of Baumgart discloses to rotate the assembly because heating is generally not symmetrical. It would have been obvious to rotate the Siegmund/ Dobbins assembly during the processing so as to ensure even heating of the assembly.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Krohn, Brehm, Hicks(2), Phaneuf, Akers, Oh and Berkey are cited as being relevant to the disclosed embodiments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

2-24-04

jmh